

# THE WORLD OF LEARNING

FIFTEENTH EDITION

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# THE WORLD OF LEARNING 1964-65

FIFTEENTH EDITION



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## FOREWORD

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THE rapid growth of education throughout the world is once again reflected in a large increase in the number of pages in this, the fifteenth, edition of *THE WORLD OF LEARNING*.

New universities are being founded in developed and undeveloped countries alike and existing universities increase in size year by year. The great advance in technological education also contributes to the expansion of this volume.

Once again we have been greatly encouraged in our task by the willing co-operation of innumerable contributors, without whose help we should not have been able to present such a wealth of up-to-date information. We should like to extend to them our very sincere thanks.

December 1964.



## ABBREVIATIONS

A.A.	..	Associate in Arts	A.R.C.O.	..	Associate of the Royal College of Organists
A.B.	..	Bachelor of Arts	A.R.C.S.	..	Associate of the Royal College of Science
A.C.A.	..	Associate of the Institute of Chartered Accountants	A.R.E.	..	Associate of the Royal Society of Painter Etchers
Acad.	..	Academy	A.R.I.B.A.	..	Associate of the Royal Institute of British Architects
A.C.C.S.	..	Associate of the Corporation of Secretaries	A.R.I.C.	..	Associate of the Royal Institute of Chemistry
A.C.I.I.	..	Associate of the Chartered Insurance Institute	A.R.I.C.S.	..	Associate of the Royal Institution of Chartered Surveyors
A.C.I.S.	..	Associate of the Chartered Institute of Secretaries.	Ariz.	..	Arizona
A.C.T.	..	Australian Capital Territory	Ark.	..	Arkansas
A.D.C.	..	Aide-de-camp	A.R.S.A.	..	Associate of the Royal Scottish Academy; Associate of the Royal Society of Arts
Admin.	..	Administrative, Administration	A.R.W.S.	..	Associate of the Royal Society of Painters in Water Colours
Agr. de D.	..	Agrégé de Droit	A.S.C.E.	..	American Society of Civil Engineers
Agr. de M.	..	Agrégé de Médecine	A.S.M.E.	..	American Society of Mechanical Engineers
Agr. de Sc.	..	Agrégé de Science	Asscn.	..	Association
Agr. des L.	..	Agrégé des Lettres	Assoc.	..	Associate
A.I.A.	..	Associate of Institute of Actuaries; American Institute of Architects	Asst.	..	Assistant
A.I.A.L.	..	Associate Member of the International Institute of Arts and Letters.	Aug.	..	August
A.I.B.	..	Associate of the Institute of Bankers	B.A...	..	Bachelor of Arts
A.I.C.E.	..	Associate of the Institution of Civil Engineers	B.Agr.	..	Bachelor of Agriculture
A.I.C.E.A.	..	Associate of Industrial and Commercial Executive Accountants	B.A.(Ed.)	..	Bachelor of Arts (Education)
A.I.Ch.E.	..	American Institute of Chemical Engineers	B.A.O.	..	Bachelor of Obstetrics
A.I.F.	..	Australian Imperial Forces	B.Arch.	..	Bachelor of Architecture
A.I.I.S.	..	Associate of the Irish Institute of Secretaries	B.A.S.	..	Bachelor in Agricultural Science
A.I.L.	..	Associate of the Institute of Linguists	B.A.Sc.	..	Bachelor of Applied Science
A.I.M.	..	Associate of the Institution of Metallurgists	B.B.A.	..	Bachelor of Business Administration
A.I.Mech.E.	..	Associate of the Institution of Mechanical Engineers	B.B.C.	..	British Broadcasting Corporation
A.I.M.T.A...	..	Associate of the Institute of Municipal Treasurers and Accountants	B.C.E.	..	Bachelor of Civil Engineering
A.Inst.C.E.	..	Associate of the Institution of Civil Engineers	B.Ch., B. Chir.	..	Bachelor of Surgery
A.I.R.I.	..	Associate of the Institution of the Rubber Industry	B.Chem.E.	..	Bachelor of Chemical Engineering
A.K.C.	..	Associate of King's College (London)	B.C.L.	..	Bachelor of Civil Law; Bachelor of Canon Law
A.L.A.	..	Associate of the Library Association	B.Comm.	..	Bachelor of Commerce
Ala.	..	Alabama	B.C.S.	..	Bachelor of Commercial Sciences
A.L.S.	..	Associate of the Linnæan Society	B.D.	..	Bachelor of Divinity
A.M.	..	Master of Arts	B.D.S.	..	Bachelor of Dental Surgery
A.M.A.	..	Associate of the Museums Association	B.E.	..	Bachelor of Engineering; Bachelor of Education
A.M.I.C.E.	..	Associate Member of the Institution of Civil Engineers	B.Ec.	..	Bachelor of Economics
A.M.I.Chem.E.	..	Associate Member of the Institution of Chemical Engineers	B.Ed.	..	Bachelor of Education
A.M.I.E.E.	..	Associate Member of the Institution of Electrical Engineers	B.E.E.	..	Bachelor of Electrical Engineering
A.M.I.Mech.E.	..	Associate Member of the Institution of Mechanical Engineers	B.Eng.	..	Bachelor of Engineering
A.M.I.Struct.E.	..	Associate Member of the Institution of Structural Engineers	B.Eng.A.	..	Bachelor of Agricultural Engineering
A.P.	..	Andhra Pradesh	B.E.Sc.	..	Bachelor of Engineering Science
A.P.I.	..	Associate of the Plastics Institute	B.F.A.	..	Bachelor of Fine Arts
Apptd.	..	Appointed	B.For.	..	Bachelor of Forestry
A.R.A.	..	Associate of the Royal Academy	B.I.D.	..	Bachelor of Industrial Design
A.R.A.M.	..	Associate of the Royal Academy of Music	B.Lit(t).	..	Bachelor of Letters
A.R.C.A.	..	Associate of the Royal College of Art	B.L.L.	..	Bachelor of Laws
A.R.C.M.	..	Associate of the Royal College of Music	B.L.S.	..	Bachelor of Library Science
			B.M.	..	Bachelor of Medicine
			B.M.A.	..	British Medical Association
			B.M.E.	..	Bachelor of Mining Engineering
			B.Mus.	..	Bachelor of Music
			B.N.	..	Bachelor of Nursing

# ABBREVIATIONS

B.Paed. (or Pd.) ..	Bachelor of Pedagogy	C.S.S.F. ..	Confédération des Sociétés Scientifiques Française
B.P.E. ..	Bachelor of Physical Education	C.St.J. ..	Commander of (the Order of) St. John of Jerusalem
B.Pharm. ..	Baccalauréat en Pharmacie	Cttee. ..	Committee
B.Phil. ..	Bachelor of Philosophy	C.V.O. ..	Commander of the (Royal) Victorian Order
Br. ..	Branch		
Bro. ..	Brother	D.Agr. ..	Doctor of Agriculture
B.S. ..	Bachelor of Science; Bachelor of Surgery	D.Arch. ..	Doctor of Architecture
B.S.A. ..	Bachelor of Scientific Agriculture	D.B. ..	Bachelor of Divinity
B.Sc. ..	Bachelor of Science	D.B.E. ..	Dame Commander of (the Order of) the British Empire
B.Sc.C.E. ..	Bachelor of Science in Civil Engineering	D.C. ..	District of Columbia
B.S.C. ..	Bachelor of Science in Commerce	D.C.H. ..	Diploma in Child Health
B.Sc.Com. ..	Bachelor of Commercial Science	D.C.L. ..	Doctor of Civil Law
B.Sc.(Econ.) ..	Bachelor of Science in the Faculty of Economics	D.C.M. ..	Distinguished Conduct Medal
B.Sc.(Eng.) ..	Bachelor of Science in the Faculty of Engineering	D.Cn.L. ..	Doctor of Canon Law
B.Sc.F. ..	Bachelor of Science in Forestry	D.C.S. ..	Doctor of Commercial Sciences
B.S. in H.E. ..	Bachelor of Science in Home Economics	D.C.T. ..	Doctor of Christian Theology
B.Sc.(M.E.) ..	Bachelor of Science in Mechanical Engineering	D.D. ..	Doctor of Divinity
B.Sc.Met. ..	Bachelor of Science (Metallurgy)	D.D.C. ..	Doctorat en droit canonique
B.Sc.Pharm. ..	Bachelor of Science in Pharmacy	D. de l'U ..	Docteur de l'Université
B.S.D. ..	Bachelor of Didactic Science; Bachelor of Science in Dentistry	D.D.S. ..	Doctor of Dental Surgery
Bt. ..	Baronet	D.Econ. ..	Doctor of Economics
B.Theol. ..	Bachelor of Theology	D.Ed. ..	Doctor of Education
		Del. ..	Delegate, delegation, Delaware
c. ..	circa (approximately)	D. en D. ..	Docteur en Droit
C.A. ..	Chartered Accountant	D.Eng. ..	Doctor of Engineering
Calif. ..	California	Dept. ..	Department
Cantab. ..	Of Cambridge University	D. ès L. ..	Docteur ès Lettres
C.B. ..	Companion of the (Order of the) Bath	D. ès Sc. ..	Docteur ès Sciences
C.B.E. ..	Commander of (the Order of) the British Empire	D.F.A. ..	Doctor of Fine Arts
C.E. ..	Civil Engineer	D.F.C. ..	Distinguished Flying Cross
C.G.I.A. ..	City and Guilds Institute Award	D.H.L. ..	Doctor of Hebrew Literature
C.H. ..	Companion of Honour	D.Hy. ..	Doctor of Hygiene
Chair. ..	Chairman	D.I.H. ..	Diploma in Industrial Health
Ch.B. ..	Bachelor of Surgery	Dip. Bact. ..	Diploma in Bacteriology
Ch.M. ..	Master of Surgery (Edinburgh University)	Dip. Ed. ..	Diploma in Education
C.I.A.L. ..	Corresponding Member of the International Institute of Arts and Letters	Dip. Ing. ..	Diploma in Engineering
C.I.E. ..	Companion of (the Order of) the Indian Empire	Dip. Pub. Admin. ..	Diploma in Public Administration
Cie. ..	Compagnie (Company)	Dir. ..	Director
C.I.E.E. ..	Companion of the Institution of Electrical Engineers	D. Iur. Utr. ..	Doctor of both Civil and Canon Law
C.M. ..	Master in Surgery	D.L. ..	Doctor of Laws
C.M.G. ..	Companion of (the Order of) St. Michael and St. George	D.Lett. ..	Doctorat ès lettres
C.N.R.S. ..	Centre National de la Recherche Scientifique	D.Lit(t). ..	Doctor of Letters; Doctor of Literature
Co. ..	Company; County	D.Litt.S. ..	Doctor of Sacred Letters
Colo. ..	Colorado	D.L.S. ..	Doctor of Library Science
Comm. ..	Commission	D.M. ..	Doctor of Medicine (Oxford)
Commdr. ..	Commander	D.Math.Sc. ..	Doctor of Mathematical Science
Commr. ..	Commissioner	D.M.D. ..	Doctor of Dental Medicine
Conf. ..	Conference	D.Mus. ..	Doctor of Music
Conn. ..	Connecticut	D.Oph. ..	Doctor of Ophthalmology
Corpn. ..	Corporation	D.Paed. ..	Doctor of Paediatrics
Corresp. ..	Correspondent, Corresponding	D.Phil. ..	Doctor of Philosophy
C.P. ..	Congregation of the Passion	D.P.H. ..	Diploma in Public Health
C.P.A. ..	Certified Public Accountant	D.P.M. ..	Diploma in Psychological Medicine
C.P.H. ..	Certificate of Public Health	D.P.H.N. ..	Diploma in Public Health Nursing
C.S.I. ..	Companion of (the Order of) the Star of India	Dr.h.c. ..	Dr. honoris causa
C.S.I.R. ..	Council for Scientific and Industrial Research (re-named Commonwealth Scientific and Industrial Research Organisation)	Dr. Ing. ..	Doctor of Engineering
		Dr. Jur. ..	Doctor of Laws
		Dr. Med. ..	Doctor of Medicine
		Dr.Med.Dent. ..	Doctor of Dentistry
		Dr.Med.Vet. ..	Doctor of Veterinary Medicine
		Dr. Oec. ..	Doctor of Commerce
		Dr. Phar. ..	Doctor of Pharmacy
		Dr.rer.Hort. ..	Doctor of Horticulture
		Dr.rer.Nat. ..	Doctor of Natural Science
		Dr.rer.Pol. ..	Doctor of Political Science
		Dr. Theol. ..	Doctor of Theology

# ABBREVIATIONS

D.S.C.	..	Distinguished Service Cross	F.I.A.L.	..	Fellow of the International Institute of Arts and Letters
D.Sc.	..	Doctor of Science	F.I.B.	..	Fellow of the Institute of Bankers
D.Sc.A.	..	Doctor of Applied Science	F.I.C.E.A.	..	Fellow of Industrial and Commercial Executive Accountants
D.Sc.Agr.	..	Doctor of Science in Agriculture	F.I.C.S.	..	Fellow International College of Surgeons
D.Sc.Pol.	..	Doctor of Political Sciences	F.I.I.S.	..	Fellow of the Irish Institute of Secretaries
D.S.I.R.	..	Department of Scientific and Industrial Research	F.I.L.	..	Fellow of the Institute of Linguists
D.S.M.	..	Distinguished Service Medal	F.I.M.	..	Fellow of the Institution of Metallurgists
D.S.O.	..	Distinguished Service Order	F.Inst.F.	..	Fellow of the Institute of Fuel
D.S.T.	..	Doctor of Sacred Theology	F.Inst.P.	..	Fellow of the Institute of Physics
D.S.W.	..	Doctor of Social Work	F.Inst.Pet.	..	Fellow of the Institute of Petroleum
D.Tech.	..	Doctor in Technology	F.I.R.E.	..	Fellow of the Institution of Radio Engineers
D.Theol.	..	Doctor of Theology	F.I.R.I.	..	Fellow of the Institution of the Rubber Industry
D.T.M.	..	Diploma in Tropical Medicine	F.J.I.	..	Fellow of the Institute of Journalists
D.U.P.	..	<i>Docteur de l'Université de Paris</i>	F.K.C.	..	Fellow of King's College (London)
D.V.M.	..	Doctor of Veterinary Medicine	Fla.	..	Florida
D.V.S.	..	Doctor of Veterinary Science	F.L.A.	..	Fellow of the Library Association
E.D.	..	Doctor of Engineering (U.S.A.)	F.L.S.	..	Fellow of the Linnæan Society
Ed.B.	..	Bachelor of Education	F.M.A.	..	Fellow of the Museums Association
Ed.D.	..	Doctor of Education	F.N.I.	..	Fellow of the National Institute of Sciences (India)
Edin.	..	Edinburgh	F.Ph.S.	..	Fellow of the Philosophical Society of England
Edn.	..	Edition	F.Phys.S.	..	Fellow of the Physical Society
Ed.M.	..	Master of Education	F.P.I.	..	Fellow of the Plastics Institute
E.E.	..	Doctor of Electrical Engineering	F.R.A.C.P.	..	Fellow of the Royal Australasian College of Physicians
Exec.	..	Executive	F.R.A.C.S.	..	Fellow of the Royal Australasian College of Surgeons
f.	..	founded	F.R.Ae.S.	..	Fellow of the Royal Aeronautical Society
F.A.A.	..	Fellow of the Australian Academy of Science	F.R.A.H.S.	..	Fellow of the Royal Australian Historical Society
F.A.A.A.S.	..	Fellow of the American Association for the Advancement of Science	F.R.A.I.	..	Fellow of the Royal Anthropological Institute
F.A.C.C.A.	..	Fellow of the Association of Certified and Corporate Accountants	F.R.A.I.A.	..	Fellow of the Royal Australian Institute of Architects
F.A.C.D.	..	Fellow of the American College of Dentistry	F.R.A.I.C.	..	Fellow of the Architectural Institute of Canada
F.A.C.P.	..	Fellow of American College of Physicians	F.R.A.M.	..	Fellow of the Royal Academy of Music
F.A.C.S.	..	Fellow of the American College of Surgeons	F.R.A.S.	..	Fellow of the Royal Astronomical Society; Fellow of the Royal Asiatic Society
F.A.I.	..	Fellow of the Chartered Auctioneers' and Estate Agents' Institute	F.R.B.S.	..	Fellow of the Royal Society of British Sculptors; Fellow of the Royal Botanic Society
F.A.I.A.	..	Fellow of the American Institute of Architects	F.R.C.M.	..	Fellow of the Royal College of Music
F.A.O.	..	Food and Agriculture Organisation	F.R.C.O.	..	Fellow of the Royal College of Organists
F.A.S.E.	..	Fellow of Antiquarian Society Edinburgh	F.R.C.O.G.	..	Fellow of the Royal College of Obstetricians and Gynecologists
F.B.A.	..	Fellow of the British Academy	F.R.C.P. (E.)	..	Fellow of the Royal College of Physicians (Edinburgh)
F.B.A.A.	..	Fellow of the British Association of Accountants and Auditors	F.R.C.P.(I.)	..	Fellow of the Royal College of Physicians (Ireland)
F.C.A.	..	Fellow of the Institute of Chartered Accountants	F.R.C.S.(C.)	..	Fellow of the Royal College of Surgeons (Canada)
F.C.C.S.	..	Fellow of the Corporation of Secretaries	F.R.C.S. (E.)	..	Fellow of the Royal College of Surgeons (Edinburgh)
F.C.I.C.	..	Fellow of the Chemical Institute of Canada	F.R.C.V.S.	..	Fellow of the Royal College of Veterinary Surgeons (London)
F.C.I.I.	..	Fellow Chartered Insurance Institute	F.R.Econ.S.	..	Fellow of the Royal Economic Society
F.C.I.S.	..	Fellow of the Chartered Institute of Secretaries	F.R.F.P.S.	..	Fellow of Royal Faculty of Physicians and Surgeons
F.C.S.	..	Fellow of the Chemical Society	F.R.G.S.	..	Fellow of the Royal Geographical Society
F.C.T.	..	Federal Capital Territory	F.R.Hist.S.	..	Fellow of the Royal Historical Society
F.C.W.A.	..	Fellow of the Chartered Institute of Cost and Works Accountants	F.R.Hort.S.	..	Fellow of the Royal Horticultural Society
F.D.S.R.C.S.	..	Fellow of the Royal College of Surgeons in Dental Surgery	F.R.I.B.A.	..	Fellow of the Royal Institute of British Architects
Fed.	..	Federation, Federal	F.R.I.C.	..	Fellow of the Royal Institute of Chemistry
F.E.I.S.	..	Fellow Educational Institute of Scotland	F.R.I.C.S.	..	Fellow of the Royal Institution of Chartered Surveyors
F.F.A.R.C.S.	..	Fellow of the Faculty of Anæsthetics, Royal College of Surgeons			
F.F.R.	..	Fellow of the Faculty of Radiologists			
F.G.A.	..	Fellow of the Gemmological Association			
F.G.S.	..	Fellow of the Geological Society			
F.I.A.	..	Fellow of the Institute of Actuaries			

# ABBREVIATIONS

F.R.Met.Soc. Fellow of the Royal Meteorological Society  
 F.R.S. .. Fellow of the Royal Society  
 F.R.S.A. .. Fellow of the Royal Society of Arts  
 F.R.San.I. .. Fellow of the Royal Sanitary Institute  
 F.R.S.C. .. Fellow of the Royal Society of Canada  
 F.R.S.E. .. Fellow of the Royal Society of Edinburgh  
 F.R.S.G.S. .. Fellow of the Royal Scottish Geographical Society

F.R.S.H. .. Fellow Royal Society of Health  
 F.R.S.L. .. Fellow of the Royal Society of Literature  
 F.R.S.S. .. Fellow of the Royal Statistical Society  
 F.R.S.S.Af. Fellow of the Royal Society of South Africa

F.R.S.T.M... Fellow of the Royal Society of Tropical Medicine and Hygiene

F.S.A. .. Fellow of the Society of Antiquaries  
 F.S.A.(Scot.) Fellow of the Society of Antiquaries (of Scotland)

F.S.A.L.A... Fellow South African Library Association  
 F.S.B.E. .. Fellow of the Society for British Entomology

F.S.S. .. Fellow of the Royal Statistical Society  
 F.T.C.D. .. Fellow of Trinity College, Dublin  
 F.T.C.L. .. Fellow of Trinity College of Music, London.  
 F.T.I. .. Fellow of the Textile Institute  
 F.Z.S. .. Fellow of the Zoological Society

Ga. .. Georgia  
 G.B.E. .. Knight (or Dame) Grand Cross of (the Order of) the British Empire

G.C.B. .. Knight Grand Cross of (the Order of) the Bath

G.C.I.E. .. (Knight) Grand Commander of the Indian Empire

G.C.M.G. .. Knight Grand Cross of (the Order of) St. Michael and St. George

G.C.S.I. .. Knight Grand Commander of the Star of India

G.C.V.O. .. Knight Grand Cross of the (Royal) Victorian Order

Gen. .. General  
 Gov. .. Governor  
 Govt. .. Government

h.c. .. honoris causa  
 H.E. .. His Eminence; His Excellency  
 H.M. .. His (or Her) Majesty  
 Hon. .. Honourable; Honorary

Ia. .. Iowa  
 I.C.E. .. Institute of Civil Engineers  
 I.C.S. .. Indian Civil Service  
 Ida. .. Idaho  
 Ill. .. Illinois  
 I.L.O. .. International Labour Organisation  
 Inc. .. Incorporated  
 Ind. .. Indiana; Independent  
 Inst. .. Institute; Institution  
 Inst.C.E. .. Institution of Civil Engineers  
 Inst.E.E. .. Institution of Electrical Engineers  
 Inst.Mech.E. Institution of Mechanical Engineers  
 Int. .. International  
 I.S.O. .. (Companion of the) Imperial Service Order

J.C.B. .. Juris Canonici Bachelor (Bachelor of Canon Law)

J.C.D. .. Juris Canonici Doctor (Doctor of Canon Law)

J.C.L. .. Juris Canonici Lector

J.D. .. Doctor of Jurisprudence  
 J.P. .. Justice of the Peace  
 J.S.D. .. Doctor of Juristic Science  
 J.U.D. .. Juris utriusque Doctor (Doctor of both Civil and Canon Law)  
 Ju.D. .. Doctor of Law

Kan. .. Kansas  
 K.B.E. .. Knight Commander of (the Order of) the British Empire

K.C.B. .. Knight Commander of (the Order of) the Bath

K.C.I.E. .. Knight Commander of (the Order of) the Indian Empire

K.C.M.G. .. Knight Commander of (the Order of) St. Michael and St. George

K.C.S.I. .. Knight Commander of the Star of India

K.C.V.O. .. Knight Commander of the Royal Victorian Order

K.G. .. Knight of (the Order of) the Garter  
 K.P. .. Knight of (the Order of) St. Patrick  
 K.St.J. .. Knight of (the Order of) St. John of Jerusalem

K.T. .. Knight of (the Order of) the Thistle  
 Kt. .. Knight  
 Ky. .. Kentucky

La. .. Louisiana

L.C.C. .. London County Council

L.C.L. .. Licentiate of Canon Law

L.D.S. .. Licentiate in Dental Surgery

L. ès L. .. Licencié ès Lettres

L. ès Sc. .. Licencié ès Sciences

L.H.D. .. Doctor of Humane Letters

L.I.M. .. Licentiate of the Institution of Metallurgists

Lic.Med. .. Licentiate in Medicine

Litt.D. .. Doctor of Letters

LL.B. .. Bachelor of Laws

LL.D. .. Doctor of Laws

L.Lett. .. Licentiate of Letters

LL.L. .. Licentiate of Laws

LL.M. .. Master of Laws

L.M. .. Licentiate of Medicine; or Midwifery

L.M.S. .. Licentiate in Medicine and Surgery

L.M.S.S.A. .. Licentiate in Medicine and Surgery of the Society of Apothecaries

L.Mus. .. Licentiate in Music

L.N. .. League of Nations

L.Ph. .. Licentiate of Philosophy

L.R.C.P. .. Licentiate of the Royal College of Physicians

L.R.C.S. .. Licentiate of the Royal College of Surgeons

L.S. .. Library Science

L.S.A. .. Licentiate of Science in Agriculture

L.S.T. .. Licentiate in Sacred Theology

L.Th. .. Licentiate or Master of Theology

M.A. .. Master of Arts

M.Agr. .. Master of Agriculture (U.S.A.)

Man. .. Manager, Managing; Manitoba

M.A.O. .. Master of Obstetrics

M.Arch. .. Master in Architecture

M.A.Sc. .. Master of Applied Science

Mass. .. Massachusetts

M.B. .. Bachelor of Medicine

M.B.A. .. Master of Business Administration

M.B.E. .. Member of (the Order of) the British Empire

M.C. .. Military Cross

M.C.E. .. Master of Civil Engineering

M.Ch. .. Master of Surgery

# ABBREVIATIONS

M.Ch.D. .. Master of Dental Surgery  
M.Ch.E. .. Master of Chemical Engineering  
M.C.L. .. Master of Civil Law  
M.Com(m) .. Master of Commerce  
M.C.S. .. Master of Commercial Science  
Md. .. Maryland  
M.D. .. Doctor of Medicine  
M.D.S. .. Master of Dental Surgery  
M.E. .. Mechanical Engineer, Master of Education, Master of Engineering, Military Engineer, Mining Engineer  
Me. .. Maine  
M.E.E. .. Master of Electrical Engineering  
M.E.I.C. .. Member of the Engineering Institute of Canada  
Mems. .. Members  
M.Eng. .. Master of Engineering (Dublin)  
M.F. .. Master of Forestry  
M.F.A. .. Master of Fine Arts  
Mgr. .. Monseigneur; Monsignor  
M.H.A. .. Member of the House of Assembly  
M.H.R. .. Member of the House of Representatives  
M.I.C.E. .. Member of the Institution of Civil Engineers  
M.I.Chem.E. Member of the Institution of Chemical Engineers  
Mich. .. Michigan  
M.I.E.A. .. Member of the Institution of Engineers of Australia  
M.I.E.E. .. Member of the Institution of Electrical Engineers  
Mil. ... .. Military  
M.I.Loco.E. Member of the Institute of Locomotive Engineers  
M.I.Mar.E. ... Member of the Institute of Marine Engineers  
M.I.(Mech.)E. Member of the Institution of Mechanical Engineers  
M.I.Min.E. Member of the Institution of Mining Engineers  
M.I.M.M. .. Member of the Institution of Mining and Metallurgy  
Minn. .. Minnesota  
Miss. .. Mississippi  
M.I.P.E. .. Member of the Institution of Production Engineers  
M.I.Struct.E. Member of the Institution of Structural Engineers  
M.I.T. .. Massachusetts Institute of Technology  
M.L. .. Master of Laws  
M.L.A. .. Member of the Legislative Assembly  
M.L.C. .. Member of the Legislative Council  
M.Litt. .. Master of Letters  
M.L.S. .. Master of Library Science  
M.M.S.A. .. Master of Midwifery of the Society of Apothecaries  
M.Mus. .. Master of Music  
Mo. .. Missouri  
Mont. .. Montana  
M.P. .. Member of Parliament  
M.P.H. .. Master of Public Health  
M.Ph. .. Master of Philosophy (U.S.A.)  
M.R.A.S. .. Member of the Royal Asiatic Society  
M.R.C.P.(E.) Member of the Royal College of Physicians (Edinburgh)  
M.R.C.S.(E.) Member of the Royal College of Surgeons (Edinburgh)  
M.R.C.V.S. ... Member of the Royal College of Veterinary Surgeons  
M.R.I. .. Member of the Royal Institution  
M.R.I.A. .. Member of the Royal Irish Academy  
M.R.S.A. .. Member of the Royal Society of Arts

M.R.S.A.E. Member of Royal Society of Agricultural Engineers  
M.R.S.L. .. Member of the Royal Society of Literature  
M.S. .. Master of Science; Master of Surgery  
M.S.B.E. .. Member of the Society for British Entomology  
M.Sc. .. Master of Science  
M.Sc.A. .. Master of Applied Science  
M.Sc.Ag. .. Master of Science in Agriculture  
M.Sc.(Chem. Tech.) Master of Science in Chemical Technology  
M.Sc.D. .. Master of Science in Dentistry  
M.Sc.F. .. Master of Science in Forestry  
M.Sc.(Med.) Master of Science in Medicine  
M.Sc.N. .. Master of Science in Nursing  
M.S.D. .. Doctor of Medieval Studies  
M.S.L. .. Licentiate of Medieval Studies  
M.S.P. .. Master of Science in Pharmacy  
M.S.W. .. Master of Social Work  
M.Th. .. Master of Theology  
Mus.Bac. or B. Bachelor of Music  
Mus.Doc. or D. Doctor of Music  
Mus.M. .. Master of Music (Cambridge)  
M.V.O. .. Member of the Royal Victorian Order  
M.V.Sc. .. Master of Veterinary Science  
Nat. .. National  
N.B. .. New Brunswick  
N.C. .. North Carolina  
N.D. .. North Dakota  
Neb. .. Nebraska  
N.E.I. .. Netherlands East Indies  
Nev. .. Nevada  
N.H. .. New Hampshire  
N.J. .. New Jersey  
N.M. .. New Mexico  
N.S. .. Nova Scotia  
N.S.W. .. New South Wales  
N.U.I. .. National University of Ireland  
N.W.F. .. North-West Frontier  
N.Y. .. New York  
N.Z. .. New Zealand  
O. .. Ohio  
O.B.E. .. Officer of (the Order of) the British Empire  
O.E.E.C. .. Organisation for European Economic Co-operation  
O.F.S. .. Orange Free State  
Okla. .. Oklahoma  
O.M. .. Member of the Order of Merit  
Ont. .. Ontario  
O.P. .. Order of Preachers (Dominicans)  
Ore. .. Oregon  
O.R.S.T.O.M. Office de la Recherche Scientifique et Technique Outre Mer  
Oxon. .. Of Oxford University  
Pa. ... .. Pennsylvania  
Parl. .. Parliament; Parliamentary  
P.C. .. Privy Councillor  
Pd.B. .. Bachelor of Pedagogy  
Pd.D. .. Doctor of Pedagogy  
Pd.M. .. Master of Pedagogy  
P.E.I. .. Prince Edward Island  
P.E.N. .. Poets, Playwrights, Essayists, Editors and Novelists (Club)  
Ph.B. .. Bachelor of Philosophy  
Ph.D. .. Doctor of Philosophy  
Ph.G. .. Graduate in Pharmacy



# ABBREVIATIONS

Ph.L.	..	Licentiate of Philosophy	Sc.D.	..	Doctor of Science
Ph.M.	..	Master of Philosophy	S.C.D.	..	Doctor of Commercial Science
P.Q.	..	Province of Quebec	S.Dak.	..	South Dakota
P.R.A.	..	President of the Royal Academy	Sec.	..	Secretary
Pres.	..	President	S.I.S.T.E.R.	..	Special Institution for Scientific and Technological Education and Research
P.R.I.	..	President of the Royal Institute (of Painters in Water Colours)	S.J.	..	Society of Jesus
P.R.I.B.A.	..	President of the Royal Institute of British Architects	S.J.D.	..	Doctor of Juristic Science
Priv.Do.	..	Recognised teacher not on the regular staff	S.M.	..	Master of Science
Prof.	..	Professor	S.T.B.	..	Bachelor of Sacred Theology
P.R.S.	..	President of the Royal Society	S.T.D.	..	Doctor of Sacred Theology
P.R.S.A.	..	President of the Royal Scottish Academy	S.Th.L.	..	Sacrae Theologiae Lector (Reader or Professor of Sacred Theology)
Publs.	..	Publications	S.T.M.	..	Master of Sacred Theology
			Supt.	..	Superintendent
Q.C.	..	Queen's Counsel			
Q.H.P.	..	Honorary Physician to the Queen	T.D.	..	Territorial Decoration; Tealta Dáil (Member of the Dail), Teaching Diploma
Que.	..	Quebec	Tenn.	..	Tennessee
			Tex.	..	Texas
R.A.	..	Royal Academy; Royal Academician	Th.B.	..	Bachelor of Theology
R.A.C.P.	..	Royal Australasian College of Physicians	Th.D.	..	Doctor of Theology
R.A.C.S.	..	Royal Australasian College of Surgeons	Th.M.	..	Master of Theology
R.A.F.	..	Royal Air Force	T.U.C.	..	Trades Union Congress
R.A.M.	..	Royal Academy of Music			
R.A.S.	..	Royal Astronomical (Asiatic) Society	U.K.	..	United Kingdom
R.B.A.	..	Royal (Society of) British Artists	U.N.	..	United Nations
R.C.A.	..	Member of the Royal Cambrian Academy; Member of the Royal Canadian Academy	U.N.A.	..	United Nations Association
R.D.I.	..	Royal Designer for Industry	UNESCO	..	United Nations Educational, Scientific and Cultural Organisation
Rep.	..	Representative; Represented	UNICEF	..	United Nations International Children's Emergency Fund
resgnd.	..	resigned	Univ.	..	University
retd.	..	retired	U.N.R.W.A.	..	United Nations Relief Works Agency
Rev.	..	Reverend	U.P.	..	Uttar Pradesh (United Provinces)
R.G.S.	..	Royal Geographical Society	U.S.A.	..	United States of America
R.Hist.S.	..	Royal Historical Society	U.S.S.R.	..	Union of Soviet Socialist Republics
R.I.	..	Rhode Island; Royal Institute (of Painters in Water Colours)			
		Royal Institution	Va.	..	Virginia
R.I.B.A.	..	Royal Institute of British Architects	V.C.	..	Victoria Cross
R.I.C.S.	..	Royal Institution of Chartered Surveyors	V.D.	..	Volunteer Officers Decoration, Victorian Decoration
R.M.P.A.	..	Royal Medico-Psychological Association	Vols.	..	Volumes
R.N.	..	Royal Navy	V.R.D.	..	Royal Naval Volunteer Reserve Officers Decoration
R.O.I.	..	Royal Institute of Oil Painters	Vt.	..	Vermont
R.P.	..	Member Royal Society of Portrait Painters			
R.S.A.	..	Royal Scottish Academy	W.A.	..	Western Australia
		Royal Society of Arts	Wash.	..	Washington (State)
R.S.C.	..	Royal Society of Canada	W.E.A.	..	Workers' Educational Association
R.S.W.	..	Royal Scottish Society of Painters in Water Colours	Wis.	..	Wisconsin
Rt. Hon.	..	Right Honourable	W Va.	..	West Virginia
Rt. Rev.	..	Right Reverend	Wyo.	..	Wyoming
R.W.S.	..	Royal Society of Painters in Water Colours			
			Y.M.C.A.	..	Young Men's Christian Association
S.C.	..	South Carolina; Senior Counsel (Republic of Ireland)	Y.W.C.A.	..	Young Women's Christian Association
SCAP	..	Supreme Command Allied Powers			
Sc.B.	..	Bachelor of Science			



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# INTERNATIONAL

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## UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANISATION

### AIMS AND FUNCTIONS

(Article 1 of *Unesco Constitution*)

The purpose of the Organisation is to contribute to peace and security by promoting collaboration among the nations through education, science, and culture in order to further universal respect for justice, for the rule of law, and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language, or religion, by the Charter of the United Nations.

To achieve Unesco's purpose, the General Conference adopts at its biennial sessions a basic programme which stresses the main ideas underlying the aims of the Organisation and gives coherence to the detailed work plans. While the latter naturally vary from year to year, the basic programme covers the policies and main lines of work, with little change except of emphasis on this or that sector. Thus from 1965 onwards the scientific sectors (both stimulation of research and application of science to development) are to receive a priority second only to that accorded to educational activities in 1962.

The chief tasks of Unesco, as defined in its basic programme, are as follows:

1. To eliminate illiteracy and encourage universal free and compulsory education;
2. to obtain for each person an education conforming to his aptitudes and to the needs of society, including technological training and higher education;
3. to promote, through education, respect for Human Rights throughout all nations;

4. to overcome the obstacles to the free flow of persons, ideas, and knowledge between the countries of the world;

5. to promote the progress and utilisation of science for the benefit of all mankind;

6. to focus the social sciences on the study of particular social questions for the benefit both of the general public and of governments;

7. to assure the preservation of the world's inheritance of books, works of art and monuments of history and science, to make this cultural heritage known and available to all, and to promote mutual appreciation of differing cultural values;

8. to advance through the media of mass communication the causes of truth, freedom, and peace;

9. to bring about better understanding among the peoples of the world and to convince them of the necessity of co-operating loyally with one another in the framework of the United Nations;

10. to provide clearing-house and exchange services in all its fields of action, together with technical aid to nations and peoples in emergencies.

## MEMBER STATES

(November 1st, 1964)

Afghanistan  
Albania  
Algeria  
Argentina  
Australia  
Austria  
Belgium  
Bolivia  
Brazil  
Bulgaria  
Burma  
Burundi  
Byelorussia  
Cambodia  
Cameroun  
Canada  
Central African Republic  
Ceylon  
Chad  
Chile  
China, Republic of (Taiwan)  
Colombia  
Congo (Léopoldville)  
Congo (Brazzaville)  
Costa Rica  
Cuba  
Cyprus  
Czechoslovakia  
Dahomey  
Denmark  
Dominican Republic

Ecuador  
El Salvador  
Ethiopia  
Finland  
France  
Gabon  
German Federal Republic  
Ghana  
Greece  
Guatemala  
Guinea  
Haiti  
Honduras  
Hungary  
Iceland  
India  
Indonesia  
Iran  
Iraq  
Ireland  
Israel  
Italy  
Ivory Coast  
Jamaica  
Japan  
Jordan  
Kenya  
Korea, Republic of  
Kuwait  
Laos  
Lebanon

Liberia  
Libya  
Luxembourg  
Madagascar  
Malawi  
Malaysia  
Mali  
Mauritania  
Mexico  
Monaco  
Mongolian People's  
Republic  
Morocco  
Nepal  
Netherlands  
New Zealand  
Nicaragua  
Niger  
Nigeria  
Norway  
Pakistan  
Panama  
Paraguay  
Peru  
Philippines  
Poland  
Rumania  
Rwanda  
Saudi Arabia  
Senegal  
Sierra Leone

Somalia  
Spain  
Sudan  
Sweden  
Switzerland  
Syria  
Tanganyika  
Thailand  
Togo  
Trinidad and Tobago  
Tunisia  
Turkey  
Uganda  
Ukraine  
U.S.S.R.  
United Arab Republic  
United Kingdom  
United States of America  
Upper Volta  
Uruguay  
Venezuela  
Viet-Nam, Republic of  
Yemen  
Yugoslavia  
Zambia

## Associate Members

British East Caribbean  
Group  
Mauritius      Qatar

## REGULAR PROGRAMME

1. DEVELOPMENT OF INTERNATIONAL  
CO-OPERATION

Unesco aims to maintain, increase and diffuse knowledge and to encourage co-operation among the nations in all branches of intellectual activity. The League of Nations set up its International Committee on Intellectual Co-operation for the same purpose, and Unesco took over this heritage in an attempt to restore contacts broken by the Second World War. It was realised that an effective and economical method would be, first, to support existing specialist organisations, and second to encourage individual scientists, scholars, writers and artists.

The natural sciences was the first sphere in which Unesco was able to co-operate with an already firmly established body of scientific associations. Unesco's success in this field prompted action where contacts at international level were less advanced. To achieve this a number of institutions were created: the International Council for Philosophy and Humanistic Studies, the International Theatre Institute, the International Music Council, the International Association of Plastic Arts. Unesco also decided to support the work of the International PEN and the International Union of Architects. The International Council of Archives was founded on the initiative of Unesco. Financial aid is given to the International Council of Museums, the International Federation of Library Associations and the International Federation of Documentation.

In the field of social sciences, Unesco promoted the establishment of international bodies in such major

disciplines as sociology, political science, legal science and economics. Subventions have been granted to a few carefully-selected associations, including the International Economic Association, the International Statistical Institute, the International Sociological Association. The International Social Science Council and the International Committee for Social Sciences Documentation were also helped.

In the field of education, financial assistance has been given to the World Confederation of Organisations of the Teaching Profession, the International Association for Teachers' Federation, the International Association for Vocational Guidance, the World Organisation for Early Childhood Education, the New Education Fellowship, etc. A major step was the creation in 1950, with UNESCO's help, of the International Association of Universities. Subventions have also been granted to the International Bureau of Education for its documentation services.

In the field of mass communication, Unesco has found that associations have more varied activities and less well defined programmes. It has founded the International Centre of Films for Children, the International Association for Mass Communication Research, the International Film and Television Council.

Unesco also organises seminars, international discussions and conferences, for example the International Conference of Artists held in 1952, the Conference on Radio-isotopes in Scientific Research held in 1957, the International Conference on Information Processing in June 1959, and the Intergovernmental Conference on Oceanographic Research in July, 1960.

## 2. IMPROVING DOCUMENTATION

These activities include the collection, analysis and diffusion of information and statistics, and the encouraging of other organisations to do similar work. Since 1948 this has been increasingly achieved through the Education Clearing House.

Unesco has also built up a documentation and information service on opportunities and facilities for study abroad. The annual publications *Study Abroad* and *Vacations Abroad* bring such facts to a wide public.

The Clearing House in Mass Communications collects information on mass media techniques and the technical needs of mass media institutions.

In the field of culture Unesco has produced the *Index Translationum* and archives of colour reproductions of paintings. In the Social Sciences bibliographies have been produced in four major fields, sociology, political science, economics and social and cultural anthropology. Multilingual dictionaries and biographies are being prepared and attempts have been made to standardise techniques and terminologies. A study has also been made of scientific and technical dictionaries and a bibliography of monolingual glossaries has been produced.

Unesco also promotes the creation of scientific and technical documentation centres in order to meet the essential need of scientists and technicians for information on the work of their colleagues elsewhere.

Altogether, 36 national centres for the international exchange of publications are linked with Unesco. One of the chief aims of the International Centre for the study of the Preservation and Restoration of Cultural Property, newly set up in Rome, is to collect, analyse and distribute information concerning scientific and technical problems arising in the fields of preservation and restoration. Similarly the Documentation and Study Centre for the History of Art and Civilisation in Ancient Egypt is now in full operation.

## 3. SCHOOL EDUCATION

The Unesco programme for school education may be divided into five main parts, Free and Compulsory Education; the School Curriculum and Improvement of Education; Education for International Understanding and Co-operation; Vocational and Technical Education; and Higher Education. An essential concomitant to all these is the need for a programme of educational planning.

Forty-five per cent of the world's population of fifteen years old and over cannot read or write; forty-five per cent of the world's children of school age do not attend school. Of those who do attend school, many are poorly educated because of inadequate facilities, undertrained teachers and an outmoded curriculum. It is, in addition, realised that the need for humanistic studies and for education for international understanding has never been so great. Recent developments in science and industry have also created new problems in higher education or have accentuated old ones.

**Free and Compulsory Education.** For more than ten years Unesco has conducted a campaign to extend free and compulsory education to all children of primary school age. A series of international and regional conferences was organised; direct assistance was offered to Member States in the form of experts and of fellowships for national educators. The first major effort for training teachers was launched in 1957 as Unesco's Major Project for the Extension of Primary Education in Latin America. The Project concentrates upon teacher training and educational planning, and is now in full operation.

Three major enquiries into the educational needs of tropical Africa, the Arab-speaking States, and South and South-East Asia, were completed, as a result of which the General Conference, in December, 1962, deciding to continue giving priority to educational programmes, re-adopted programmes for the development of education in these areas, totalling \$8.8 million for 1963-64, in addition to a \$4 million emergency programme for Africa financed out of voluntary contributions, and to Special Fund activities (see below).

**The School Curriculum and the Improvement of Education.** In 1954 a programme for the Improvement of the School Curriculum was initiated by the creation of an international advisory committee, by the holding of regional seminars, by providing the services of experts, by disseminating information on mechanisms of curriculum revision, curriculum research, etc., by initiating an inquiry into the adaptation of the school curriculum to the age and development levels of children. In 1960 Unesco completed an inquiry into the role and place of the humanities in school education. Two outside bodies are closely associated with UNESCO in this field: the International Bureau of Education at Geneva, and the Institute of Education at Hamburg.

**Education for International Understanding and Co-operation.** Unesco seeks to stimulate interest in educational activities by facilitating international exchanges of ideas among educational leaders and teachers, in aiding in the development of better methods and materials and in encouraging action within schools on many aspects of education for international understanding.

**Vocational and Technical Education.** Activity in this field has led mainly to the provision of services of experts, fellowships and equipment. Regional conferences and training courses on Vocational and Technical Education have recently been organised.

By an agreement reached in 1960 between UNESCO and the International Labour Office, two new international instruments have been completed, the UNESCO one dealing with technical education in school and the ILO one with vocational training after or out of school.

**Higher Education.** Work in this sphere is carried out mainly through the International Association of Universities, created in 1950. A scheme of collaboration on a large scale started in 1960 with some of the American Foundations on the subject of access to universities.

**Educational Planning.** As a background to all education, it has been increasingly realised that educational planning is unquestionably a necessity in the world today, not only because of the tremendous economic, technical and intellectual effort involved in all educational work, but for a more fundamental reason—because of the speed with which it is developing and its growing complexity. The General Conference authorised Unesco to furnish Member States with three forms of assistance in this field. Firstly, the Organisation advises governments on planning methods and procedures. Secondly, Unesco sends missions and experts to countries requesting them, to advise governments on appropriate machinery for their planning services and the preparation and implementation of their overall development plans. Since 1960, planning missions have been sent to some 30 countries and technical assistance in the form of expert services has been provided for about 50 countries. These activities will probably be increased in the future. Thirdly, Unesco assists in training national planning staff. To supervise this field of assistance, Unesco, with help from the World Bank and the Ford Foundation established an International Institute for Educational Planning in Paris, which started work in early 1964 with the basic aim of helping nations accelerate their economic and social progress through improved educational planning.



#### 4. EDUCATION OUTSIDE SCHOOL

The work in this group of activities is divided into three sections: fundamental education, education of adults, and the development of youth activities.

**Fundamental Education (Community Development).** The main effort is directed towards those people who have not had the opportunity to go to school. Fundamental education aims at imparting the minimum knowledge and skills that people need to help themselves to improve their standard of living and to take a productive part in the social and economic life of their community. The basic need is to combat ignorance, which extends over half the world's population and is instrumental in breeding disease, poverty and lethargy.

Two regional fundamental education centres have been set up: one for Latin American States at Patzcuaro, Mexico, established in 1951, the other for Arab States at Sirs-el-Layyan, Egypt, established in 1955. Unesco has helped in setting up national expert training centres in a number of countries and also co-operates in many fundamental and adult education projects undertaken by Member States in Asia, Africa, Latin America and the Arab States.

**Adult Education.** The aim is to foster education, not only at school but throughout life. Unesco assists Member States and appropriate international organisations in the development of adult education activities by: co-operating to set up national and regional seminars; sending field missions to make surveys and advise on projects; publishing reports on projects and activities.

During 1964, Unesco sponsored two regional conferences on the planning and organisation of literacy programmes in Africa and in the Arab States, where the vital importance was stressed of all forms of out-of-school education in a rapidly changing world. During 1964, also, plans for an experimental programme in mass literacy, which would prepare the way for a World Campaign for Universal Literacy, were recommended by a committee of experts on literacy set up to advise Unesco's Director General, who had been charged by the UN General Assembly to explore the possibility of such a world campaign. Among recommendations was one that three-year pilot projects in six to eight selected countries should be undertaken by Unesco as part of the first of three consecutive phases in a long-term programme to achieve universal literacy.

**Youth Work.** The work is concentrated on assisting Member States and appropriate international organisations and institutions in the development of youth education for social responsibility and international understanding and co-operation. The Section supplies information and brings groups interested in the same problems into contact with each other. It also sponsors international voluntary work camps and an annual conference of work camp organisers. Another important interest is the Unesco Youth Institute at Gauting, Germany. The Institute is an international meeting place where conferences are organised to study youth activities. During 1964, Unesco organised an international youth conference at Grenoble, France, attended by delegates from 73 Member States and the first inter-governmental conference ever held on youth problems.

#### 5. AID TO SCIENTIFIC RESEARCH IN THE NATURAL SCIENCES AND THEIR APPLICATION TO DEVELOPMENT

These activities cover the following fields: basic sciences, earth sciences (astronomy and general geophysics, hydrology, oceanography, physics of the earth's crust, geological sciences, soil sciences, ecological studies and

conservation of natural resources); life sciences (brain research, cell and molecular biology, microbiology, participation in basic research on cancer).

The exchange of ideas and results is encouraged by congresses and documentation, and the award of grants for study tours and missions. More concrete action was provided in the specific subjects mentioned above. Three main methods have been devised to produce the desired results. The first is to establish for each subject a new intergovernmental body, whether regional or international, which conducts its scientific work on its own initiative. The European Organisation for Nuclear Research and the International Computation Centre are examples of bodies of this kind. The second is to set up, within Unesco itself, an administrative co-ordinating body which possesses certain financial resources and acts on the scientific advice of a group of experts selected for that purpose: an example is provided by the new Intergovernmental Oceanographic Commission set up in 1961, with a permanent staff within the Secretariat to service it. The third is to provide assistance for the establishment and operation of a non-governmental body responsible for achieving the co-operation desired, e.g. the International Brain Research Organisation set up in 1960.

Advisory Committees of experts of world-wide repute have been set up to administer the Arid Zone, the Marine Sciences and Humid Tropics Research Projects. Among the recent or new initiatives undertaken by Unesco, or those to which the Organisation provides its active support include the International Years of the Quiet Sun, the World Magnetic Survey (a continuing project of the International Geophysical Year), the International Hydrological Decade, as well as the International Indian Ocean Expedition, the International Co-operative Investigations of the Tropical Atlantic, and the Co-operative Study of the Kuroshio. Furthermore, in the field of seismology, Unesco has set up a system of emergency missions to send experts to the affected areas immediately after earthquakes have occurred.

General advice has also been given by short-term missions on the establishment of national scientific research centres.

The most important activity has been the creation *in toto* of institutions and services previously almost non-existent. It has been possible in this way to strengthen geophysical and seismological observatories, and geological and hydro-geological services.

The application of science and technology according to the needs of developing countries will henceforth take a large place among the scientific activities of Unesco: technical and economic evaluation of these needs and direct aid which could be provided to Member States are the basic features of this programme.

#### 6. APPLIED SOCIAL SCIENCES

The Social Science programme makes a clear distinction between the promotion of pure research and learning in the field of the social sciences and the use of the social sciences for solving social problems. The promotion of original research has also taken place into the attitudes of the people of one country towards people of other countries and into the roots of tension in local communities within different societies. On the other hand, a broad study of principal research trends throughout the world in the social and human sciences is in progress under Unesco's direction.

An inter-disciplinary programme has been constituted on the three great problems of our time: respect for human rights and the struggle against racial prejudice, the



economic and social problems of newly-independent countries, the economic and social consequences of disarmament.

The analysis of the role of education, science, technology and information in economic development, pursued methodically, will continue to furnish the data necessary for the operational activities of Unesco and other international organisations, as well as the programme of statistical analysis and human resources assessment.

## 7. PRESERVATION OF THE CULTURAL HERITAGE OF MANKIND

Activity in this section is directed to the conservation and protection of the world's inheritance of books, works of art and monuments of history and science. Encouragement is also given to the exchange of publications, objects of artistic and scientific interest and other materials of information. A World Campaign for Monuments was launched by Unesco in 1964.

The protection of cultural property, historic monuments and of museum objects, archives, libraries, etc. during war is sought through the International Convention for the Protection of Cultural Property in the Event of Armed Conflict, signed at The Hague in 1954. Fifty-two Member States are parties to this Convention.

An International Centre for the Study of the Preservation and Restoration of Cultural Property has been established in Rome. A manual on the protection of cultural property has been published which deals with techniques for preservation and conservation. Since 1955, missions have advised on the preservation of culture in Peru, Yugoslavia, the Lebanon, Syria, Iraq, Israel, Egypt, Jordan, Iran, Pakistan, Afghanistan, Ecuador and the Sudan. International Seminars on Arts and Education have also been held since 1950 and two International Societies have been launched—one for Education through Art and the other for Music Education.

The International Campaign to save the Monuments of Egyptian and Sudanese Nubia launched in February, 1960, by Unesco, achieved almost total success in demonstrating the world's cultural solidarity. At the present time, the archaeological survey in the areas that will be inundated after the construction of the new Aswan dam is largely completed, while the dismantling of the threatened temples and monuments is being completed. The operation for safeguarding the temples of Abu-Simbel has begun.

## 8. MUTUAL APPRECIATION OF CULTURAL VALUES

The aim is to encourage a better mutual knowledge of the cultures of different peoples. In this way it is hoped to lay the foundations of real international understanding necessary for maximum peaceful co-operation among peoples.

The ninth session of Unesco's General Conference (New Delhi, 1956) established a ten-year major project aimed at developing the "Mutual Appreciation of Eastern and Western Cultural Values". The scheme aims to break down the barriers to the flow of information and ideas between the orient and occident. It has stimulated a very large number of cultural activities of an exchange nature throughout the world.

Unesco appointed a Commission in 1951 to prepare the publication of a history of the scientific and cultural development of mankind. The first two volumes, dealing with pre- and proto-history, were published in London in May 1963. A quarterly *Journal of World History* is published by the Commission.

The department sponsors international circulation of masterpieces of the visual arts and of music. Exhibitions of reproductions representing the great periods of both Western and Eastern art are circulating in Member States.

The Unesco *World Art Series* albums, devoted to works of art not sufficiently known outside their countries of origin, are published in five languages. Catalogues listing high quality reproductions of paintings of all periods have been published for the guidance of students, teachers and the general public.

Under the auspices of the International Music Council a collection has been made of recordings of traditional and contemporary music of all continents.

Great works representative of the genius of different people are translated and published. Translations of works from twenty-six different literatures have so far been made, chiefly into English and French.

## 9. FREE FLOW OF INFORMATION

Among the principal methods used are: sponsorship of international agreements; proposals to reduce telecommunication, postal, transport and tariff obstacles to the flow of information; administration of coupon schemes designed to overcome currency barriers; action to improve the techniques and expand the means of communication; the publication of reports and studies focusing public attention on obstacles to the free flow of information.

The underlying reason for Unesco's action in this field is that the dearth of communication facilities in large areas of the world, a maze of non-political restrictions and the high cost of sending information from country to country constitute formidable obstacles to the creation of an enlightened public opinion. In short, it appears that nearly 70 per cent of the world's peoples lack the means of being adequately informed of developments at home, let alone in other countries. "Adequate" facilities, according to a Unesco minimum standard accepted by the UN, consist of at least ten copies of a daily newspaper, five radio receivers and two cinema seats for every 100 persons. More than 100 countries and territories are below this minimum. Thus, for millions of people freedom of information, guaranteed by the universal Declaration of Human Rights, is far from being a reality.

Here are some of the results achieved:

1. Two international Agreements have been sponsored by Unesco: the Agreement on the Importation of Educational, Scientific and Cultural Materials and the Agreement for Facilitating the International Circulation of Visual and Auditory Materials of an Educational, Scientific and Cultural Character.

2. Proposals have been submitted to international conferences in the telecommunication, postal, transport and trade fields. Substantial concessions have been made in the rates and facilities offered.

3. Studies have been published such as *World Communications*, *Books for All*, *Trade Barriers to Knowledge*, *Transmitting World News and Mass Media and National Development*, which have spurred national efforts to reduce obstacles to the flow of information.

4. Member States have taken steps to facilitate the movement of persons engaged in educational, scientific and cultural activities.

5. Unesco's Coupon Schemes have helped to remove currency conversion obstacles, enabling individuals or organisations to purchase foreign books, films and other information materials and to pay for educational travel abroad.

In addition, Unesco has studied the means of ensuring that technological advances in communication should be